

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 10, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gardin et al. (WO 95/21690).

As to claims 1-4, Gardin discloses an isostatic press, comprising: a pressure chamber for accommodating a pressure medium 6, the pressure chamber being enclosed by a radial prestressed cylindrical element that is force-absorbing body 3, said force absorbing body having an inner surface capable of being in direct contact with a pressure medium when the chamber is filled; a prestressing device 1 provided around an outer envelope surface of the force-absorbing body (figures 1 and 4) capable of providing the radial prestress in the force absorbing body, (page 10, lines 31-35; page 7, lines 6-16); and at least one tunnel-like passage 14 running essentially over the length of said outer envelope surface of the force-absorbing body (figure 3; page 5, lines 23-26), the tunnel-like passage being defined by a groove in said outer envelope surface of the force-absorbing body and a portion of said prestressing device covering said groove, capable of conducting pressure medium to a point of detection if such medium has leaked out through said force absorbing body from the pressure chamber

Art Unit: 1747

to the outer envelope surface of the force-absorbing body (page 3, lines 25-32). The applicant should note that the cylindrical element 3 reads on the term “force-absorbing body” as such is capable of absorbing at least a minor amount of force. Applicant is specifically referred to page 10, lines 31-35, which discloses that the force absorbing body 3 can be in direct contact with an outermost cylindrical element. Because this cylindrical element is partially prestressed when the force-absorbing body is inserted, the cylindrical element imparts stress on the force-absorbing body and thus reads on a prestressing device. In this embodiment, the passages 14 shown in figure 3 will be defined by the groove in the force absorbing body 3 and the prestressing device 1, because 3 will be placed directly within the prestressing device 1. It should also be noted that the conical shape of the inner portion of said cylindrical element 1 will at least partially prestress the force-absorbing body as it is inserted. Additionally, the cylindrical element is a force absorbing cylindrical wall of a pressure vessel.

As to claim 19, at least a portion of said prestressing device is in contact with portions of the outer envelope surface that form the groove. As to claim 20, a single prestressing device 1 is directly on the on the outer envelope surface. As to claim 10, Gardin discloses an isostatic press wherein said at least one tunnel-like passage runs in the form of a spiral around said outer envelope surface and essentially along the whole of its length (figure 1; page 5, lines 23-26).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gardin.

As to claims 11 and 12, Gardin discloses channels as discussed in claim 10 above. The examiner interprets use of the plural term "channels" as a disclosure that there are more than one parallel tunnel-like passages running in the form of a spiral around said outer envelope surface and essentially along the whole of its length. Nonetheless, one of ordinary skill in the art would have appreciated to use at least two parallel tunnel-like passages as doing such would aid in accurately and quickly determining if a leak is present. At the time the invention was made it would have been obvious to one of ordinary skill in the art to have at least two tunnel-like passages running in parallel in the form of a spiral around said outer envelope surface and essentially along the whole of its length as such would achieve the advantages discussed above.

4. Claims 1-4, 6, 8, 10-12, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maerz (US 2002/0076347) in view of Yoneda (US 2004/0004314, newly cited) and further in view of Gardin.

As to claims 1 and 2, Maerz discloses an isostatic press, comprising: a pressure chamber for accommodating a pressure medium 6, the pressure chamber being enclosed by a cylindrical element 4 that is capable of functioning as a force-absorbing body (figure 1, paragraph 0033), wherein the cylindrical element 4 has inner surface capable of directly contacting a pressure medium.

It is not clear if Maerz discloses an isostatic press further comprising: the force absorbing body being radially prestressed; a prestressing device provided around an outer envelope surface of the force-absorbing body capable of providing the radial prestress in the force-absorbing body; and at least one tunnel-like passage running essentially over the length of said outer envelope surface of the force-absorbing body, the tunnel-like passage being defined by a groove in said outer envelope surface of the force-absorbing body and a portion of said prestressing device covering said groove, for conducting pressure medium to a point of detection if such medium has leaked out through the force absorbing body from the pressure chamber to the outer envelope surface of the force-absorbing body.

Yoneda discloses a press having a pressure chamber for accommodating a pressure medium, the chamber being enclosed by a radial prestressed force absorbing body 2, and a prestressing device 3 provided around the outer envelope surface of the force-absorbing body for providing the radial prestress in the force absorbing body 2 (figures 1, 7a, 7b, paragraphs 0065-0068). Prestressing is known and preferable in the art since it provides radial stress to the force-absorbing body. Yoneda further discloses that it is beneficial to form passages 3b essentially running over the length of said outer

Art Unit: 1747

envelope surface and between the prestressing device and the outer envelope surface of the force-absorbing body 2, said passages for conducting fluid to a point of detection if fluid has leaked to the outer surface envelope surface of the force absorbing body (figures 7a, 7b, paragraphs 0081-0084). The presence of said passages enables detection of fluid leakage, and thus it is possible to detect any cracks in the force-absorbing body and reduce the risk of a serious accident due to a cracked force-absorbing body (paragraphs 0081-0084). At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the press of Maerz such that a prestressing device is provided around the outer envelope surface of the force-absorbing body and capable of providing the radial prestress in the force absorbing body and at least one passage is essentially running over the length of said outer envelope surface and between the prestressing device and the outer envelope surface of the force-absorbing body, wherein said passage is for conducting pressure medium to a point of detection if such medium has leaked out from the pressure chamber to the outer envelope surface of the force-absorbing body as taught by Yoneda above in order to achieve the benefits discussed above.

Yoneda discloses that the passage is formed in the surface of the prestressing device rather than the force-absorbing body. However, Gardin discloses that when forming a passage for conducting pressure medium on an outer envelope surface of a force-absorbing body, the passage can either be formed by a groove in said outer envelope surface, a groove in the inner surface of the device covering said outer envelope surface, or both (page 5, lines 15-20). At the time the invention was made it

Art Unit: 1747

would have been obvious to one of ordinary skill in the art to modify the press of Maerz as modified by Yoneda such that the passage is defined by a groove in said outer envelope surface of the force absorbing body and a portion of said prestressing device covering said groove as such is a well known and equivalent alternative to forming the groove or passage in the surface of the prestressing device as taught by Gardin above. Additionally, it would have been obvious to form the passage in a tunnel-like shape as is known in the art and taught by Gardin (page 9, lines 31-33).

As to claims 3 and 4, in the modified press discussed above, the force adsorbing body of Maerz is a cylindrical wall of a cylindrical pressure vessel and is a force-absorbing cylindrical wall of a pressure vessel. As to claim 6, Yoneda discloses the prestressing device is at least one of wire-shaped and band-shaped and is wound around said outer envelope surface (paragraphs 0065-0067, figures). As to claim 8, Maerz discloses supplying the pressure medium by a pumping device 8 (paragraph 0033). One of ordinary skill in the art would have readily recognized to dimension the cross-sectional area of the tunnel-like passage such that said tunnel-like passage is capable of conducting pressure medium flow essentially equal to if not larger than the flow of the medium into the chamber supplied by the pumping device as doing such will enable leaks in the force adsorbing body to be detected quickly. As to claim 10, Gardin discloses the limitations as discussed above. Thus, in the modified press at least one tunnel-like passage will run in the form of a spiral around said outer envelope surface and essentially along the whole of its length. As to claims 11 and 12, Gardin discloses channels as discussed in claim 10 above. The examiner interprets use of the plural term

Art Unit: 1747

"channels" as a disclosure that there are more than one parallel tunnel-like passages running in the form of a spiral around said outer envelope surface and essentially along the whole of its length. Nonetheless, one of ordinary skill in the art would have appreciated to use at least two parallel tunnel-like passages as doing such would aid in accurately and quickly determining if a leak is present. At the time the invention was made it would have been obvious to one of ordinary skill in the art to have at least two tunnel-like passages running in parallel in the form of a spiral around said outer envelope surface and essentially along the whole of its length as such would achieve the advantages discussed above. As to claims 19, Maerz discloses that the force-absorbing member forms the pressure chamber, and Yoneda discloses the prestressing device is in direct contact with the outer envelope surface of the force absorbing body. Because in the modified press the groove will be formed in the outer envelope surface, the prestressing device will be in direct contact with portions of the outer envelope surface that form the groove. As to claim 20, Yoneda discloses the prestressing device is in direct contact with the outer envelope surface of the cylindrical element.

Response to Arguments

5. Applicant's arguments filed 08/19/2011 have been fully considered but they are not persuasive. The applicant argues that in the embodiment of Gardin discussed on page 10, lines 31-35, the cylindrical element 1 is not fully prestressed when the force absorbing body 3 is inserted into said cylindrical element 1. Applicant should note that the cylindrical element 1 can not be fully prestressed when the force absorbing body 3

Art Unit: 1747

is inserted yet still function as a prestressing device by imparting prestress to the force absorbing body 3. The disclosure on page 10, lines 31-35 that cylinder 1 is further prestressed after insertion of the force-absorbing body 3 does not preclude the cylinder from being partially prestressed before insertion of the force-absorbing body and thus imparting at least partial prestress to the force-absorbing body. Additionally, even if it is not taken that the cylindrical element 1 is not at least partially prestressed before insertion of the force-absorbing body 3, it should be noted that the conical shape of the inner portion of said cylindrical element 1 will at least partially prestress the force-absorbing body as it is inserted. Applicant's arguments are not commensurate with the scope of the claims since the claims do not exclude the prestressing device from only imparting partial prestress to the force absorbing body. The disclosure of another prestressing device (wires or bands 7) around the cylindrical element 1 does not preclude said cylindrical element 1 from also functioning as a prestressing device by imparting at least partial prestress on body 3 during insertion of said body 3 as discussed above.

6. With respect to Maerz in view of Yoneda and Gardin, the applicant asserts that the examiner makes a conclusory statement and did not identify any objective teaching or reference any knowledge generally available to one of ordinary skill in the art that would have led one of ordinary skill to modify Maerz with Yoneda. This is not accurate. The examiner clearly and explicitly identified the section of Yoneda that provides the motivation for the combination. Applicant is referred to page 6, lines 4-7 of the Office Action dated 10/22/2011: "The presence of said passages enables detection of fluid

Art Unit: 1747

leakage, and thus it is possible to detect any cracks in the force-absorbing body and reduce the risk of a serious accident due to a cracked force-absorbing body (paragraphs 0081-0084)". The applicant then goes on to suggest that in order for Marez to be properly modified by Yoneda, Marez must disclose that there is a problem or need to be solved. This is not accurate. A primary reference need not disclose a shortcoming or problem with its own device in order for said device to be properly modified with another reference under 35 U.S.C. 103 (a).

Applicant's assertion that because Yoneda is directed to detecting leaks for cooling water one would not look to combine Yoneda with Marez is flawed. The type of fluid being detected is not germane to the merits of the rejection. The advantages of using grooves to detect leaking fluid disclosed by Yoneda would be realized by the apparatus of Marez regardless of the type of fluid being detected. Additionally, applicant should note that the fluid (or pressure medium) is material to be worked upon and does not further limit the claims. MPEP 2115.

Applicant's arguments on the bottom of page 12 and top of page 13 are individual attacks on Yoneda. Applicant is reminded that one cannot show nonobviousness by attacking references individually and in a vacuum of each other as a rejection under 35 U.S.C. 103 is a consideration relating to the combined teachings of the references (and not each reference in a vacuum of the others). Marez discloses a force-absorbing body capable of direct contact with a pressure medium. Contrary to the applicant's assertion, Yoneda clearly discloses a prestressing device 3. Applicant's arguments presented in the last paragraph of page 13 are directed to the cooling water

Art Unit: 1747

of Yoneda. The fluid or medium being detected is not germane to the merits of the rejection discussed above.

Applicant's arguments on page 14 are pure speculation. Applicant states that one of ordinary skill in the art "would most likely add" a prestressing device in the form of piano wire. Applicant provides zero rational for this. Applicant also states that one of ordinary skill would "possibly" add spacer pieces. Again there is zero rational for this and it is unclear how adding spacers would prevent the combination of the references from being obvious and achieving the above discussed advantages. With respect to the second paragraph on page 14, the applicant's statements are again purely speculative.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1747

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER SCHATZ whose telephone number is (571)272-6038. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTOPHER SCHATZ/
Primary Examiner, Art Unit 1747

Application/Control Number: 10/587,743
Art Unit: 1747

Page 13